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ABSTRACT

Nine years after the original study was conducted this follow-up study explores the self concept of kindergarten children in relationship to their educational achievement and self concept. Original subjects were 93 children randomly chosen from 417 children attending school in suburban New York City. When in kindergarten, in 1968, the children were administered two self-concept tests. Achievement scores of the children were then recorded up through the seventh grade. Scores for body self, social self, academic self, global self and a composite score were obtained from teachers' yearly assessments of pupils' self-concept. In 1977, the time of the follow-up study, 28 children remained in district schools. Using the Statistical Package for the Social Sciences, data were evaluated by race, social class and sex. In spite of the small number of cases, a significant correlation between self-concept in kindergarten and self-concept nine years later was found among middle class white and black children. Self-concept in kindergarten was a better predictor of academic achievement in sixth and seventh grades for middle class black children than for middle class white children. Lower class black children who had the lowest self-concepts in kindergarten relative to the other three groups had significantly higher self concepts than these groups in the eighth grade. On the whole, the effect of self-concept on achievement was a less significant variable as the children became older. (Author/RH)

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An Investigation Into the Relationship Between Self-Concept and Achievement of Lower and Middle Class Black and White Children: Kindergarten Through Eighth Grade

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INTRODUCTION

During the fall of 1968, this investigator carried out a study evaluating the self-concepts of 93 kindergarten children controlling for sex, race and social class. It was found, that before schooling effects were felt, class was a more significant variable than race for self-concept development. That is, middle-class black and white children at the age of five had statistically significantly higher self concepts than lower-class black and white children. There were no significant sex differences. In the Spring of 1977, it was felt a follow-up on as many of the 93 children as possible would provide further data regarding the relationship between self concept measured before schooling and educational achievement and the stability of self concept. Additionally, it was considered valuable to correlate the teachers' written appraisals of the children throughout the grades and self concept measured in kindergarten and eighth grades.

THEORY AND EMPIRICAL STUDIES

An individual who has high self-esteem respects and considers himself or herself worthy[1], feels competent[2] and has a sense of belonging[3]. If one's self-esteem is low, one lacks respect for himself or herself and feels incapable, insignificant, unsuccessful and unworthy[4].

Very few studies are available that analyze the data for stability of the self-concept. In general, self-concept measures or indicators that have been used longitudinally have demonstrated moderate stability over time[5].

Many investigators have found a positive correlation between self-concept and achievement. Studies done with children after the first grade have shown that children with learning difficulties tended to see themselves as less adequate than those who were doing well[6]. Some of the earlier studies did not control for sex, intelligence or social class, making it difficult to see the real effect of self-concept as separated from these other significant variables.

Reading is an achievement area that is a significant skill essential for success in our society. It has been found to be correlated with self-concept in many recent studies with children in grades one

through twelve[7]. These studies were done after the beginning of the kindergarten experience. Since failure in school could develop negative self-concept instead of the reverse, it is difficult to determine which is cause and which effect[8]. It is felt, that studying children before academic failure affects self-concept, helps to clarify the cause-effect relationship.

A few studies of beginning kindergarten children have evaluated the effect of early childhood self-concept on learning[9]. In general, controlling for social class and intelligence, these studies indicated that children with higher self-concepts were achieving better in reading and math than those with lower self concepts.

HYPOTHESIS

1) Self-concept measured in kindergarten would predict school achievement.

2) School achievement would be positively related to self-concept as measured in eighth grade.

3) Self-concept measured in kindergarten and eighth grade would be positively correlated.

4) The factors that are predictive of academic achievement would differ by race and social class.

5) Teacher ratings would be positively correlated with achievement and objective self-concept tests in kindergarten and eighth grade.

6) Social class differences in self-concept would be found in the eighth grade measures.

METHOD

Subjects

Ninety-three children randomly chosen from a heterogeneous total kindergarten population of 417 children attending a Central School District in a New York City suburb were followed up nine years later. The number of students in the school district year by year can be seen in Table I (p.14). The original sample was divided into lower and middle class according to paternal education and occupation. The children were administered two self-concept tests early in their kindergarten experience as reported by Samuels[10]. The achievement scores of the 93 children were recorded up through the seventh grade, or until they left the school district, to determine the relationship between educational achievement and self-concept as measured before schooling. At the time of the

second study 28 children who were still in the school district (approximately 30% of each of the original groups - see Table II).

INSTRUMENTS

The achievement test scores used were the Metropolitan Readiness Test given in kindergarten, the Metropolitan Reading and Mathematics Achievement Tests, Grades 1 - 6, and the New York State Reading and Mathematics Tests, Grade 6. The final mean grade for seventh grade was computed and used as an achievement index. The Piers-Harris Childrens' Self-Concept Scale was given to the 28 children during the spring that they were in the eighth grade[11]. This instrument is a measure of general self-concept consisting of eighty simple descriptive statements to which the student reacts with a yes/no response. A test-retest correlation of 0.77 has been reported[12].

A subjective assessment of each teacher's views of a pupil's self-concept was obtained from anecdotal records filed each year. Comments were given a value of +1 if positive, -1 if negative and 0 if neutral or absent. Scores for body self, social self, academic self, global self and a composite score were obtained.

PROCEDURES

The data were analysed using the Statistical Package for the Social Sciences[13]. Test scores from the Clark-U, Brown IDS, Piers-Harris and Achievement Tests were converted to their percentile equivalents. Subjective teacher assessments of pupil self-concept were estimated as described above. The data were evaluated by race, social class and sex.

The Otis Lennon Mental Ability Test which had been administered in grade six indicated that all of the children scored in the normal range of intelligence. All variables - within the sub groups and for the whole group - were intercorrelated (by PEARSON CORR[14]). Multiple regression analysis (by subprogram REGRESSION[15]) was used in the predictability of sixth and seventh grade achievement. Sixth grade standard reading and mathematics scores and the seventh grade final average were each correlated with up to five of the following independent variables: Clark-U Test; Brown Test; Metropolitan Kindergarten Readiness Test; Metropolitan Mathematics Achievement Test, First Grade; Metropolitan Reading Achievement Test, First Grade; and the First Grade Teacher's Composite Self-Concept Assessment.

Piers-Harris and Clark-U scores for the four pupil groups were compared by analysis of variance and t-test procedures.

RESULTS

Hypothesis 1

Self-concept on the Clark-U test administered in kindergarten correlates significantly with math and reading achievement in all grades. The sub-group data show that the correlations are higher for middle-class white and black children than for lower-class black and white children. The only group where kindergarten self-concept is consistently predictive of achievement from kindergarten to sixth grade is the black middle class, particularly in reading. (Reading - grade 1, $P < 0.02$; grade 2, $P < 0.01$; grade 3, $P < 0.002$; grade 4, $P < 0.003$; grade 5, $P < 0.006$; grade 6, $P < 0.01$ (Met.); grade 6, N.Y.S. Reading, $P < 0.004$; Math. grade 3, $P < 0.04$; grade 4, $P < 0.001$).

Self-concept in kindergarten is significantly related to scores on the kindergarten Metropolitan Readiness Test only for black middle-class ($P < 0.03$) and white middle-class children ($P < 0.001$).

Self-concept in kindergarten was predictive of

seventh grade average only for the black lower class child ($P < 0.04$).

Hypothesis 2

School achievement data indicate that self-concept in the eighth grade is generally not significantly related to school achievement measured earlier. The only statistically significant correlations are with the Metropolitan Readiness Test in the white middle class ($P < 0.03$) and the black lower class ($P < 0.03$) and with the black middle class in reading grade 3 ($P < 0.03$), grade 4 ($P < 0.02$), and grade 5 ($P < 0.03$); and in Math grade 3 ($P < 0.04$), and grade 4 ($P < 0.01$). In general, the correlations between achievement and eighth grade self-concept decrease from kindergarten to eighth grade, indicating that as a child progresses in school, negative self-concept becomes a less potent variable for affecting positive achievement.

Hypothesis 3

The correlation between the Clark U Self-Concept Test given in kindergarten and the Piers-Harris Self-Concept Test administered in eighth grade shows statistical significance for the middle class black and white groups (white middle class $r=0.775$, $P < 0.02$, black middle class $r=0.804$, $P < 0.03$). Although the lower class groups showed a lack of statistical

significance, the correlations are strong (r=0.879 and 0.979 for the black and white children respectively).

Hypothesis 4

Multiple regression analysis to predict sixth and seventh grade performance indicates, that self-concept as measured by the Clark U Test in kindergarten for the black middle class and teacher self-concept evaluation and the Brown Test in kindergarten for lower class black children, are more potent than achievement tests in grade one. For the white children, the achievement tests given in kindergarten and first grade are better predictors of sixth and seventh grade performance than are the self-concept test scores.

Hypothesis 5

There are no consistent correlations between teachers' written assessments of children's self-concept and the objective measurements obtained during kindergarten and eighth grade, or with academic achievement.

Hypothesis 6

There are no social class differences in self-concept in eighth grade as measured by the Piers-Harris Test. This can be attributed almost entirely

to a much higher score for the black lower class group than was predicted by their Clark U Test results. (See Table III)

In the other pupil groups, (white middle class, black middle class, white lower class) the agreement between the Clark U and Piers-Harris test scores is striking (Table III). The statistically significant difference between the social classes originally found in the large sample measured with the Clark U test in kindergarten is clearly reflected in this small sample looking at their original Clark scores. ($P < 0.001$)

DISCUSSION

The original sample of 93 children was assessed for achievement over a period of eight years. The attrition of the student sample because of moves out of the school district resulted in only 28 being administered a second self-concept test in eighth grade. In spite of the small number of cases, there was a statistically significant correlation between self-concept as measured before the effects of schooling took place and self-concept nine years later in the middle-class white and black children. This lends support to other studies which suggest that self-concept is consistent and stable after early childhood.[16] Success in school is important for middle

class families. It is possible, that added pressure on middle class children who feel less positively about themselves, decreases confidence and ability to achieve. This is supported by others.[17]

The fact that self-concept as measured in kindergarten was a better prediction of academic achievement in sixth and seventh grade for black middle class children than for white middle class children indicates the importance of self concept. Is it possible that the self-fulfilling prophesy is more powerful for black than for white children? A child sees himself or herself as"significant others" view him or her. Change is possible if teachers do not have preconceived notions about minority children. It was impossible to find any consistency to support a self fulfilling prophesy theory looking at teachers' anecdotal records. The records were sparse, full of subjective statements and varied in quality and quantity from teacher to teacher and from grade to grade.

An important finding is that the lower class black children had significantly higher self-concepts in eighth grade relative to the other three groups. These same children had the lowest self-concepts in kindergarten. Other recent studies of upper grade lower class black students have also indicated higher

self-concepts for them than for white or black middle class children.[18] At the kindergarten level, it appears that defensiveness has not entered the picture yet; that is, these children's defences become firmer as they grow older and they tend to overrate themselves. Long[19] discusses such a response in evaluating the Soares and Soares data.

Another possible explanation which supports both this finding, the lack of consistency of self-concept measured in kindergarten and eighth grade and the one that the achievement of the black middle class child is more dependent on self-concept measurement, is suggested by this writer.[20] Academic self-concept may be of more central importance to middle class black (and white children) perhaps because of the greater influence teaachers and parents have over their school performance. In a sense, discrimination and powerlessness allows the lower class black child to externalize his failure and blame others. The teacher's attitude could be subjective and prejudicial and could add to this feeling of powerlessness. If a middle class black child does poorly academically, his failure is less likely to be supported by his parents and peers. The finding that the self-concept of the middle class and particularly the black middle class child is significantly related to achieve-

ment makes it evident that a focus on self-concept enhancement is particularly important. Negative self-concepts have been changed by positive school experiences.[21] Additionally, school can be made more relevant for lower class children.

On the whole, as expected, the effect of self-concept on achievement becomes less and less of a significant variable as the child gets older. Nevertheless, looking at individual children, it was found that those children who tested lowest in the Brown IDS[22] in kindergarten fared poorly in achievement later on. This test is useful for identifying such children, regardless of class.

Although some of the correlations are high, caution regarding the results is indicated due to the small size of the sample. This study suggests the need for a larger investigation to test the hypotheses more definitely.

TABLE I

Numbers of Students During the Nine Years of Study

	Total
Early Kindergarten (Self-Concept Tests)	93
Metropolitan Kindergarten Reading Test	85
" " Achievement Test: Grade 1	75
" " " " Grade 2	65
" " " " Grade 3	63
" " " " Grade 4	55
" " " " Grade 5	54
" " " " Grade 6	50
New York State Achievement Tests - Grade 6	50
IQ (Otis Lennon Mental Ability Test)- Grade 6	50
Grade Average - Grade 7	36
Piers-Harris Childrens' Self-Concept Scale-Grade 8	28

TABLE II: Children in Study Kindergarten and Eighth Grade - Separated by Race And Social Class

Group	Numbers - 8th Grade	Numbers - kindergarten	% of Total
Lower Class White	4	17	24%
Lower Class Black	7	25	28%
Middle Class White	8	25	32%
Middle Class Black	9	26	34%
Total	28	93	

TABLE III: Self-Concept Differences Between the Clark and Piers-Harris Tests

Group	N	Clark*	Piers-Harris*	t	P
Middle Class White	8	67.4 ± 8.20	63.6 ± 11.5	0.2690	NS
Middle Class Black	7	77.0 ± 8.54	75.9 ± 8.43	0.0912	NS
Lower Class White	7	31.3 ± 10.3	32.3 ± 8.51	0.0747	NS
Lower Class Black	4	18.8 ± 8.56	65.3 ± 13.3	2.9242	< 0.02

*Mean ± Standard Error of the Mean

FOOTNOTES

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